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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,246	01/23/2004	Donald Allen Pile	2007906-5286US (R087 1273	8048
23345	7590	12/15/2011	EXAMINER	
MCGUIREWOODS, LLP 1750 TYSONS BLVD SUITE 1800 MCLEAN, VA 22102			FELTON, AILEEN BAKER	
			ART UNIT	PAPER NUMBER
			1731	
			MAIL DATE	DELIVERY MODE
			12/15/2011 PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/764,246

**Applicant(s)**

PILE ET AL.

**Examiner**

AILEEN B. FELTON

**Art Unit**

1731

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 September 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,5-13,15,16,18-22,32,34-38,40,41,44 and 45 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

- 6) ☒ Claim(s) 1,3,5-13,15,16,18-22,32,34-38,40,41,44 and 45 is/are rejected.

- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,3,5-13,15,16,18-22,32,34-38,40,41,44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over John, Jr. et al (6,478,903) in view of Boberg (5,654,520) or Calsson (4,853,052) and Mei et al (6878221).

John, Jr. et al discloses the composition substantially as claimed including an oxidizer such as potassium nitrate from 20-70 % (col. 2, lines 50-55), a secondary explosive such as PETN at 3%(col. 4, lines 35-37 and Table 1), a sensitizer such as tetrazene from 4-11 % (col. 4, lines 37-47), and a metallic fuel such as aluminum from 2-20 % (col. 4, lines 55-65). The composition also includes bismuth sulfide as the fuel or inflammable material in the primer mix (col. 2, lines 45-65) but does not mention the use of bismuth oxide.

Both Boberg (examples) and Calsson (col. 2 table) teach that it is known to use bismuth trioxide in amounts greater than 15 % in a primer composition.

Mei teaches the use of PETN from 0-30% as a fast fuel in a primer composition.

It would have been obvious to one of skill in the art at the time the invention was made to use the bismuth trioxide as taught by Boberg or Calsson with the composition of John, Jr. et al since Boberg or Calsson suggests that the bismuth trioxide catalyst

has been found to be applicable to priming mixtures generally and since John, Jr. et al suggests the use of a bismuth salt for use in priming compositions. It is also obvious to use PETN in the amounts suggested by Mei to provide additional energy to a priming composition. Alternatively, it is prima facie obvious to combine two compositions, each taught for the same purpose to yield a third composition for that very purpose. *In re Kerkhoven*, 205 USPQ 1069, *In re Pinten*, 173 USPQ 801, and *In re Susi*, i69 USPQ 423.

### ***Response to Arguments***

3. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to AILEEN B. FELTON whose telephone number is (571)272-6875. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/AILEEN B FELTON/  
Primary Examiner  
Art Unit 1731